

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION**

**MAGĒMĀ TECHNOLOGY LLC,**

**Plaintiff,**

**v.**

**PHILLIPS 66, PHILLIPS 66  
COMPANY, AND WRB REFINING LP,**

**Defendants.**

**Case No. 4:20-cv-02444**

**JURY TRIAL DEMAND**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Magēmā Technology LLC (“Magēmā”) files this Complaint for patent infringement against Defendants Phillips 66, Phillips 66 Company, and WRB Refining LP (“WRB”) (collectively “Defendants”) and alleges as follows:

**INTRODUCTION**

1. Magēmā’s asserted patents are the culmination of work that began with a scientist and an engineer. Michael Moore is a chemist and businessman, who has extensive experience in the refining industry as well as aboard ocean-going vessels while serving in the United States Navy, and Bertrand Klussmann is a chemical engineer who spent a large portion of his career designing refining process solutions and developing innovative solutions to challenging problems facing the refining industry, for which he was awarded prior patents.

2. Recognizing the significance of impending global regulations mandating lower sulfur content in marine fuel oil and the inadequacy of then-existing refining products and process technology to produce compliant marine fuel oil, Mr. Moore and Mr. Klussmann worked together,

drawing from their collective decades of experience, to invent novel low sulfur fuel oil (“LSFO”) products and processes for producing LSFO that are claimed in Magēmā’s asserted patents.

3. Mr. Moore and Mr. Klussmann, as well as others who later joined them, invested significant time and resources, including their own personal savings, in developing and commercializing the patented technology through their company, Rigby Refining LLC (“Rigby Refining”)<sup>1</sup>. As part of their commercialization efforts, Mr. Moore, Mr. Klussmann, and others from Rigby Refining, were introduced to Defendants Phillips 66 and Phillips 66 Company (collectively “Phillips”). Key employees from Phillips professed a need for LSFO technology and expressed a serious interest in the Magēmā technology. For almost an entire year, Rigby Refining repeatedly met, emailed, and discussed, in confidence, the then patent-pending technology with Phillips.

4. After requesting and receiving technical information as well as a technology tutorial presentation in February 2018, Phillips began to covertly implement the patented inventions in at least two of their refineries, with full knowledge that the inventors had filed for the asserted patents covering this technology, which the U.S. Patent and Trademark Office (“PTO”) ultimately granted. Despite the inventors’ best efforts to notify Phillips of their intellectual property rights, including giving Phillips written notice of the first patent’s issuance, Phillips continued its infringing activities, never bothering to respond to or acknowledge communications from the inventors once it had their technology in hand. In late 2019, Phillips began offering for sale and selling infringing LSFO products.

---

<sup>1</sup> Rigby Refining is contractually committed to the commercialization of the asserted Magēmā patents and the technology that embodies the asserted Magēmā patents. Magēmā, however, owns all rights associated with the asserted Magēmā patents, including the right to sue for current and past infringement.

5. Phillips' history of strategic and opportunistic use of others' intellectual property until sued<sup>2</sup> reeks of an internal policy embracing so-called "efficient infringement," wherein corporations deliberately choose to infringe a patent rather than pay for a patent license, believing that the costs and hurdles stacked against a patent owner will deter it from enforcing its patent rights and believing that they are better off paying damages for past infringement in the form of a court-ordered reasonable royalty than engaging in licensing negotiations prior to infringement for a market-based reasonable royalty. While such behavior may be viewed as efficient for Phillips, there is nothing efficient about the wider impact of "efficient infringement" on the patent system. "Efficient infringement" frustrates the fundamental constitutional promise of rewarding inventors for their inventive efforts.

6. Magēmā brings this action to protect its intellectual property and to hold Phillips accountable for its unauthorized and willful infringement. Phillips' improper copying and unauthorized use of Magēmā's patented inventions not only fails to compensate the inventors for Phillips' extensive use of Magēmā's intellectual property, but also it substantially impedes Magēmā's efforts to commercialize the patented technology with other companies.

7. Finally, Phillips' egregious refusal to acknowledge or respond to the inventors, demonstrates a blatant disregard for Magēmā's patent rights, and coupled with its willful and unauthorized infringement, forced Magēmā to bring this action, thereby making this case

---

<sup>2</sup> See, e.g., *Separation Engineers, Inc., v. ConocoPhillips Company, et al.*, 12-cv-1713 (S.D. Tex. 2012) Complaint (ECF 1) and Opinion (ECF 60) (pertaining to Phillips' predecessor company, ConocoPhillips, and finding "a refiner told an inventor to hire a lawyer because it was using the inventor's technology without permission."); *Maxma v. ConocoPhillips, Inc.*, 2:03-cv-421 (E.D. Tex. 2003) Complaint (ECF 1) (pertaining to Phillips' predecessor company, ConocoPhillips, and alleging "[u]nder the guise of a product evaluation period that was stretched out over years, ConocoPhillips misappropriated Maxma's EMP technology and trade secrets, surreptitiously incorporating the confidential disclosures into ConocoPhillips' own technologies.").

exceptional and entitling Magēmā to an award of attorneys' fees and costs incurred in prosecuting this case.

### **THE PARTIES**

8. Plaintiff Magēmā is a Delaware limited liability company, having a principal place of business at 710 N. Post Oak Road, Suite 351, Houston, Texas 77024.

9. On information and belief, Defendant Phillips 66 is a Delaware corporation, having a principal place of business at 2331 CityWest Blvd., Houston, Texas 77042.

10. On information and belief, Defendant Phillips 66 Company is a Delaware company, having a principal place of business at 2331 CityWest Blvd., Houston, Texas 77042 and is a wholly-owned subsidiary of Phillips 66.<sup>3</sup>

11. On information and belief, Defendant WRB is a Delaware limited partnership, having a principal place of business at 411 S. Keeler Ave., Bartlesville, Oklahoma 74003 and maintaining a regular and established place of business at 2331 CityWest Blvd., Houston, Texas 77042. On information and belief, Phillips 66 is the operator and managing partner of WRB.<sup>4</sup>

### **NATURE OF THE ACTION**

12. This is a civil action for infringement of Magēmā's U.S. Patent No. 10,308,884 ("the '884 Patent"), a true and correct copy of which is attached as Exhibit 1; U.S. Patent No. 10,533,141 ("the '141 Patent"), a true and correct copy of which is attached as Exhibit 2; U.S. Patent No. 10,604,709 ("the '709 Patent"), a true and correct copy of which is attached as Exhibit 3; and U.S. Patent No. 10,584,287 ("the '287 Patent"), a true and correct copy of which is attached

---

<sup>3</sup> Phillips 66 2019 Annual Report, filed February 21, 2020 *available at* [https://s22.q4cdn.com/128149789/files/doc\\_financials/annual\\_report/2019/PSX-web-ready.pdf](https://s22.q4cdn.com/128149789/files/doc_financials/annual_report/2019/PSX-web-ready.pdf)

<sup>4</sup> Phillips 66 2019 Annual Report, filed February 21, 2020 *available at* [https://s22.q4cdn.com/128149789/files/doc\\_financials/annual\\_report/2019/PSX-web-ready.pdf](https://s22.q4cdn.com/128149789/files/doc_financials/annual_report/2019/PSX-web-ready.pdf)

as Exhibit 4 (collectively, “the Magēmā Patents”). This action arises under the Patent Act of the United States, 35 U.S.C. § 101 *et seq.*

13. Each of the Magēmā Patents was fully examined by the United States Patent and Trademark Office (“PTO”) and issued after such examination. The Magēmā Patents are valid and enforceable.

14. The ’884 Patent was duly and legally issued on June 4, 2019.

15. The ’141 Patent was duly and legally issued on January 14, 2020.

16. The ’709 Patent was duly and legally issued on March 31, 2020.

17. The ’287 Patent was duly and legally issued on March 10, 2020.

18. Each of the named inventors assigned the Magēmā Patents to Magēmā, as reflected in the records of the PTO. Magēmā owns the right, title and interest in each of the Magēmā Patents, including the right to sue for past and present infringement.

### **JURISDICTION AND VENUE**

19. This Court has original jurisdiction over the subject matter of this patent litigation action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

20. This Court has personal jurisdiction over Defendant Phillips 66 because Phillips 66 maintains a principal place of business in Houston, Texas, and from that location regularly conducts and/or directs the acts accused of infringement herein. On information and belief, Phillips 66 operates its refineries that practice the infringing processes from its Houston, Texas offices. On information and belief, Phillips 66 also makes, uses, supplies, trades, advertises, offers to sell, and/or sells the infringing LSFO products, within the State of Texas and this District, as set forth in the Paragraphs below. Phillips 66 has purposefully and voluntarily placed one or more of its infringing LSFO products into the stream of commerce with the intention and expectation that they will be purchased and used by customers in this District by trading, offering to sell, and/or selling

the infringing LSFO products through its Houston, Texas offices.

21. This Court also has personal jurisdiction over Defendant Phillips 66 Company because Phillips 66 Company maintains a principal place of business in Houston, Texas, and from that location regularly conducts and/or directs the acts accused of infringement. On information and belief, Phillips 66 Company operates its refineries that practice the infringing processes from its Houston, Texas offices. Further, on information and belief, Phillips 66 Company makes, uses, supplies, trades, advertises, offers to sell, and/or sells the infringing LSFO products, within the State of Texas and this District, as set forth in the Paragraphs below. Phillips 66 Company is listed as the manufacturer and supplier of the infringing LSFO product and provides a Houston, Texas address on publicly available safety data sheets for said product. Phillips 66 Company has purposefully and voluntarily placed one or more of its infringing LSFO products into the stream of commerce with the intention and expectation that they will be purchased and used by customers in this District by trading, offering to sell, and/or selling the infringing LSFO products through its Houston, Texas offices.

22. This Court has personal jurisdiction over Defendant WRB because WRB maintains a regular and established place of business and regularly conducts business in Houston, Texas, availing itself of the rights and benefits of the laws of Texas and this District. On information and belief, WRB's Wood River Refinery, which practices the infringing processes, is operated from Houston, Texas. On information and belief, WRB, either directly or through its operator and managing partner (Phillips 66), makes, uses, supplies, trades, advertises, offers to sell, and/or sells the infringing LSFO products, within the State of Texas and this District, as set forth in the Paragraphs below. WRB has purposefully and voluntarily placed one or more of its infringing LSFO products into the stream of commerce with the intention and expectation that they will be

purchased and used by customers in this District by trading, offering to sell, and/or selling the infringing LSFO products in Houston, Texas.

23. Venue is proper in this judicial district under 28 U.S.C. § 1400(b) because Defendants maintain regular and established places of business in this District, regularly conduct business within this District, and, on information and belief, have committed acts of infringement in this District. On information and belief, Phillips 66, Phillips 66 Company, and WRB share an over 1 million square foot facility in Houston, Texas and employ over 2,000 people in Houston, Texas.

### **BACKGROUND**

#### **Regulation of the Sulfur Content in Marine Fuel Oils**

24. Heavy marine fuel oil, the fuel used to power massive engines of ocean-going vessels vital to international trade, plays a crucial role in the global economy. The combustion of heavy marine fuel oil in these engines, however, contributes to global pollution, emitting undesirable exhaust gases into the air.

25. Historically, ocean-going vessels have primarily consumed inexpensive, high sulfur heavy marine fuel oil, which is also sometimes referred to as residual fuel oil or bunker fuel oil. The combustion of sulfur-containing heavy marine fuel oil produces sulfur oxides (SO<sub>x</sub>), which are released into the air as part of the exhaust gas. Sulfur oxides, including sulfur dioxide (SO<sub>2</sub>), are known pollutants, both harmful to human health and the environment. For example, sulfur oxides contribute to haze and acid rain.

26. In 1997, the International Maritime Organization (“IMO”), an agency of the United Nations responsible for issuing certain standards for the international maritime industry including environmental standards, adopted what is known as the Convention for Prevention of Marine Pollution (“MARPOL”) Annex VI. *See* MARPOL 73/78, Annex VI at Regulation 14. Annex VI

curtails sulfur oxide emissions from ocean-going vessels through a reduction of the sulfur content of heavy marine fuel oil. Annex VI initially went into effect in 2005, capping sulfur content of heavy marine fuel oil at 4.50% by weight. *See, e.g.*, MARPOL 73/78, Annex VI at Regulation 14. Since then, the limits on sulfur content in heavy marine fuel oil have been progressively tightened.

27. In 2008, IMO adopted revised Annex VI to further limit the sulfur content of heavy marine fuel oil. *See* Marine Environment Protection Committee (“MEPC”) Resolutions 176(58), 320(74)<sup>5</sup>; 40 C.F.R. §§ 1043.1, 1043.5, 1043.100. Specifically, revised Annex VI mandated a global reduction of the sulfur content of heavy marine fuel oil for ocean-going vessels from a maximum of 4.50% by weight to a maximum of 3.50% by weight, effective January 2012, and an additional, more drastic reduction from 3.50% by weight to 0.50% by weight in January 2020 (“the IMO 2020 Sulfur Cap”). MEPC 176(58) at Regulation 14; 40 C.F.R. § 1043.60. The IMO 2020 Sulfur Cap imposed a staggering 85% reduction of the sulfur content of previously available heavy marine fuel oil.

28. In addition to the general IMO 2020 Sulfur Cap, revised Annex VI imposed even stricter caps for emission control areas (“ECAs”), including the North American ECA, which is comprised of most of the U.S. and Canadian coast, MEPC 190(60), and the U.S. Caribbean Sea ECA, MEPC 202(62). For ECAs, revised Annex VI mandated a reduction of the sulfur content of heavy marine fuel oil for ocean-going vessels from a maximum of 1.50% by weight to a maximum of 1.00% by weight, by July 2010<sup>6</sup>, and an additional reduction from 1.00% by weight to 0.10%

---

<sup>5</sup> MEPC is the IMO’s technical body on marine pollution related matters and coordinates IMO’s activities related to prevention and control of environmental pollution.

MEPC resolutions are *available at* [http://www.imo.org/en/KnowledgeCentre/IndexofIMOResolutions/Marine-Environment-Protection-Committee-\(MEPC\)/Pages/default.aspx](http://www.imo.org/en/KnowledgeCentre/IndexofIMOResolutions/Marine-Environment-Protection-Committee-(MEPC)/Pages/default.aspx)

<sup>6</sup> Because the U.S. Caribbean Sea ECA was not created until July 2011, the effective date for this cap as to this ECA was January 2014 instead of July 2010. MEPC 202(62)



by weight by January 2015 (“the IMO ECA Sulfur Cap”). MEPC 176(58) at Regulation 14; 40 C.F.R. § 1043.60.

29. Under revised Annex VI, the only alternative to switching to IMO-compliant fuel oil is the installation of an exhaust gas cleaning system known as “scrubber” to remove sulfur oxides from the exhaust gases prior to discharging the exhaust gases into the air. MEPC 259(68). Scrubbers have not been widely adopted in ocean-going vessels given costs, size, and logistics associated with the installation process.

30. Since 2010, the IMO 2020 Sulfur Cap posed a looming, serious threat to the international maritime industry, stemming from concerns that IMO 2020 compliant fuels would be prohibitively expensive and potentially unsuitable for ocean-going vessels as well as concerns that existing refineries and infrastructure would not be able to supply the global demand for IMO 2020 compliant fuels and IMO ECA compliant fuels. Not only did the IMO 2020 Sulfur Cap pose a serious disruption to the international maritime industry, but, as refiners realized that the demand for high sulfur fuel oil would plummet around the effective date of the IMO 2020 Sulfur Cap, refineries needed a new way to dispose of their high sulfur residual hydrocarbon streams that are produced as byproducts of other refining processes. In October 2016, IMO confirmed the January 2020 effective date of the IMO 2020 Sulfur Cap. MEPC 280(70).

31. With significant economic incentive to find a solution to this problem, the refining industry proposed several fuels to comply with the IMO 2020 Sulfur Cap and the IMO ECA Sulfur Cap, including (1) blending higher sulfur heavy residual hydrocarbons with lower sulfur distillate or distillate-like hydrocarbons to reach a specific sulfur content (“Residual-Distillate Blends”), (2) using marine gas oil (“MGO”) or marine diesel oil (“MDO”) that are largely comprised of distillate materials, and (3) using liquefied natural gas (“LNG”). Because of well-known disadvantages with

using MGO, MDO, and LNG, which are explained in the Magēmā Patents, *see, e.g.*, '884 Patent at 3:39-4:9, and a belief that sulfur molecules are essentially “trapped” in complex residual hydrocarbons, making the extent of sulfur removal required by the IMO sulfur caps economically impracticable if not technically unfeasible, the refining industry primarily focused on processes to create Residual-Distillate Blends in response to the IMO 2020 Sulfur Cap and the IMO ECA Sulfur Cap.

32. This approach, however, still presents many economic and technical drawbacks. For example, Residual-Distillate Blends are still more expensive because the lower sulfur distillate hydrocarbons are more expensive. Distillate hydrocarbons also alter important fuel oil properties, including the viscosity and density, potentially rendering the Residual-Distillate Blends unsuitable for use in the engines of ocean-going vessels. As a result, Residual-Distillate Blends are less desirable to the maritime industry. In addition, mostly paraffinic distillate hydrocarbons have limited miscibility with highly aromatic heavy residual hydrocarbons. Such Residual-Distillate Blends may not be uniform mixtures and/or may separate during storage. Further, paraffinic distillate hydrocarbons tend to destabilize asphaltene molecules that are soluble in highly aromatic heavy residual hydrocarbons, thereby causing the complex asphaltene molecules to precipitate from the Residual-Distillate Blends. Asphaltene precipitates impair the operation of ship machinery during voyages, causing potentially dangerous mechanical failures. Finally, the delicate balance of paraffinic and aromatic hydrocarbons in Residual-Distillate Blends effectively prohibits refueling at different port locations with different Residual-Distillate Blends, essentially locking ships into specific suppliers. Not to mention that none of these solutions fully resolved the refiners' problem as to how to dispose of their unwanted, byproduct high sulfur residual hydrocarbon streams.

33. As scheduled, the IMO 2020 Sulfur Cap recently took effect on January 1, 2020.

**The Asserted Magēmā Patents**

34. Mr. Moore and Mr. Klusmann, the named inventors on the first issued Magēmā Patent, recognized the above-described problems with the available marine fuel oil products and the state of refining process technology as well as the implications of the looming IMO 2020 Sulfur Cap.

35. Mr. Moore and Mr. Klusmann also understood that sulfur content is only one property of heavy marine fuel oil. Other standards specify additional properties of marine fuel oil for use in an ocean-going vessel's engines. Such standards are designed to ensure that a fuel will properly perform in such engines without causing operational risks, such as mechanical failures and/or safety risks to the crew. One example is the International Organization for Standardization ("ISO") 8217:2017 that provides bulk properties acceptable for fuels for use in marine diesel engines, including ranges or limits for, *inter alia*, density, viscosity, flash points, flow properties and oxidation stability. *See* Exhibit 5 (ISO 8217:2017 Table).

36. Going against known and accepted refining industry practices, which focused on formulating Residual-Distillate Blends and coking high sulfur hydrocarbons to produce more distillates hydrocarbons, Mr. Moore and Mr. Klusmann's innovative solution proposed using a completed ISO 8217:2017 heavy marine fuel oil and hydroprocessing the heavy marine fuel oil to remove sulfur while preserving its key properties. Their resulting hydroprocessed heavy marine fuel oil product was compliant with the ISO 8217:2017 standard, the IMO 2020 Sulfur Cap, and the IMO ECA Sulfur Cap.

37. Mr. Moore and Mr. Klusmann filed their first provisional application on February 12, 2017, almost three years before the IMO 2020 Sulfur Cap went into effect.

**Rigby Refining Discloses the Patented Technology to Phillips**

38. Phillips is well aware of the named inventors, the technology embodying the Magēmā Patents, and the Magēmā Patents themselves.

39. In hopes of commercializing their invention, in March of 2017, Mr. Moore, the CEO of Rigby Refining, arranged a meeting with Phillips about Magēmā’s “Solution to meet MARPOL Sulfur Limits.” In advance of the meeting, Mr. Moore emailed Phillips a confidential presentation, which identifies “patents filed on both the process and operation parameters.”

40. The Phillips’ employee who set up the meeting explained in the calendar invitation that Mr. Moore “has developed a process to reduce sulfur in marine fuel,” that “this work is currently under patent review,” and further described the technology as his “proprietary technology.”

41. On April 3, 2017, Mr. Moore and Mr. Klussmann met with a number of Phillips’ employees, including its Global Manager of Fuel Oils, Romulo Monsalve, Phil Swaim, Jason Gislason, and Simon Holt, at Phillips’ offices in Houston, Texas to discuss the patent-pending technology and to present various collaboration and licensing options. Phillips’ attendees expressed interest, and, on the following day, Phillips requested that Mr. Moore “contact Phil Swaim to get the sampling process moving forward for the PNW (Ferndale) and NYH (Bayway) barrels,” which he did.

42. On May 23, 2017, Mr. Moore met with Mr. Swaim and Mr. Monsalve over lunch, to discuss the samples and pilot testing. He also sent an NDA to Phillips in order to obtain samples for pilot testing. Despite having expressed interest—as well as skepticism regarding the technology—neither responded.

43. After May 2017, communications from Phillips ceased for months, until February 13, 2018, when Dennis Vauk, Phillips 66’s Director of Hydroprocessing Technology, reached out

to Rigby Refining through email. Mr. Vauk requested a technical discussion of the “technology for desulfurizing fuel oil” and requested information about “how it might benefit [Phillips’] refineries in meeting the new 5000 ppm fuel oil spec,” *i.e.*, the IMO 2020 0.50% Sulfur Cap.

44. On February 14, 2018, Mr. Moore responded, sending additional technical information, including results from testing of high sulfur feedstock, and requesting more information about what Mr. Vauk wanted to discuss. In response to Mr. Moore’s email, Mr. Vauk identified two Phillips’ refineries, a “refinery on [*sic*] west coast that makes about 14,000 bpd of 2%+ sulfur fuel oil” and an “east coast refinery that makes about 20,000 bpd of ~1% sulfur residue.” Mr. Vauk wanted to know “what [Magēmā’s] process would likely do for these two examples.”

45. On February 16, 2018, Rigby Refining again met with Phillips in Phillips’ Houston, Texas offices. This meeting included at least Mr. Vauk from Phillips and Mr. Klussmann from Rigby Refining. Mr. Klussmann presented a technology tutorial, including technical know-how, about the still patent-pending technology. During this meeting, Mr. Vauk indicated he understood and agreed with the technical aspects of the presentation, but expressed skepticism that Magēmā’s technology was feasible in view of timing and costs. Following this meeting, Phillips unexpectedly ceased communications.

#### **Phillips Surreptitiously Implements the Patented Technology**

46. At a public February 2018 Credit Suisse Energy Conference, Greg C. Garland, Phillips 66’s Chairman and Chief Executive Officer, told attendees that Phillips 66’s IMO 2020 preparedness plan did not include making significant investments, focusing instead on Phillips’ existing facilities to coke higher sulfur fuel oil and produce more distillate hydrocarbons. Exhibit

6 (Feb. 13 2018 Credit Suisse Transcript) at 9.

47. Yet mere weeks after the technical meeting with Rigby Refining, on March 26, 2018, Phillips submitted a construction permit application for an “International Maritime Operations Fuel Treatment Project” to the Illinois EPA for its Wood River Refinery, located in Roxana, Illinois. Exhibit 7 (March 2018 Permit). The Project Summary states that “[t]he project would enable the petroleum refinery to *remove sulfur* compounds from *fuel* to be used on marine vessels so that the fuel would meet new IMO fuel standards.” Exhibit 8 (March 2018 Fuel Treatment Project Summary) at 2 (emphases added).

48. Publicly, from May 2018 through June 2019, Phillips 66 described its “IMO 2020 Preparedness” in investor slide decks. In these slide decks, Phillips 66 continued emphasizing its existing “portfolio [is] well position[ed] for IMO 2020,” and highlighted its “high distillate yield” and “industry leading coking capacity,” as opposed to the modifications of its refining facilities that implement Magēmā’s technology, as reflected in its permit application. Exhibit 9 (Investor Update Slides June 2019) at 27 (emphases added).

49. At the same time, using what it had learned from the inventors, Phillips continued its adoption of Magēmā’s patented-pending technology, submitting an additional construction permit application for a “High Sulfur Fuel Oil Tank Project” at its Wood River Refinery in April 2019. Exhibit 10 (April 2019 HSFO as Feed Permit). The project summary explained “[t]he project would *enable* the refinery to *receive* high sulfur *fuel oil* as a *feedstock for processing*” and “[t]his material has become an economical feedstock because of a new International Maritime Organization (IMO) standard for the sulfur content of fuel oil used by marine vessels.” Exhibit 11 (April 2019 HSFO as Feed Project Summary) at 2 (emphases added).

50. On April 30, 2019, Phillips submitted a revision to its March 26, 2018 permit

application. The summary explains “[t]he revisions to the permit would address additional changes at the refinery to enable it to maintain a portion of its capacity to produce very low-sulfur diesel fuel.” Exhibit 12 (April 30, 2019 Permit Application Revision) at 2. The permit further describes that “[o]ther existing emission units at the refinery would be affected by this project, including process heaters, cooling towers, the hydrogen plant and sulfur recovery units. This is because when ULD2 is *processing fuel oil* rather than ultra-low sulfur diesel, additional hydrogen is required, additional load is placed on the sulfur plant and additional diesel fuel treatment is required.” *Id.* (emphases added).

51. Thereafter, in June 2019, Phillips publicly announced the “Wood River LSFO hydrotreater project” and the “Bayway LSFO hydrotreater project.” *See* Exhibit 13 (Slides delivered at the 2019 Energy Conference on June 18, 2019) at 13. On information and belief, the modifications made in connection with the Wood River LSFO hydrotreater project—as reflected in the permit applications discussed above—were similarly made as part of the Bayway LSFO hydrotreater project.

52. Attempting to reopen discussions, on June 20, 2019, Mr. Moore informed Phillips through an email to Mr. Vauk, Mr. Romulo, and Mr. Swain of the issuance of the ’884 Patent and attached the issued ’884 Patent. Mr. Moore also notified Phillips 66 of Magēmā’s other then-pending patent applications. Again, Phillips 66 did not respond.

53. On a November 6, 2019 earnings call, Phillips’ Vice President of Investor Relations, Jeff Dietert, declared “Phillips 66 is well positioned for the IMO environment with high diesel yield and more coking capacity than our peers. We’ll also hear more about *compliant bunker fuels*.” Exhibit 14 (November 6, 2019 Investor Day Transcript) at 10 (emphases added). Robert Herman, Phillips’ Executive Vice President of Refining, later explained in the same presentation

that Phillips was “making modest investments at Wood River and Bayway. Both projects are to take *high sulfur fuel oil* and *turn it into* a much higher margin *low sulfur fuel oil*. These projects also improve yields on those units.” *Id.* at 20 (emphases added).

54. On December 3, 2019, less than one month before the January 1, 2020 effective date of the IMO 2020 Sulfur Cap, Phillips issued a safety data sheet for a new product, Very Low Sulfur Fuel Oil.<sup>7</sup> Exhibit 15 (SDS Very Low Sulfur Fuel Oil). The SDS shows Phillips’ VLSFO is *not* a Residual-Distillate Blend.

55. On a February 4, 2020 earnings call, Jeff Dietert, Phillips’ Vice President of Investor Relations, confirmed that “some refining projects that allow [Phillips] to upgrade over *30,000 barrels a day* of *high-sulfur fuel oil* to *very low sulfur*, sub 0.5% blend stock. [Phillips] accomplished this late *last year* and think there’s actually some upside to those volumes, so we are moving some *very low-sulfur product into the market*. . . . We’ve also been able to bring *high-sulfur material* in as a *feedstock* for our processing units.” See Exhibit 16, Q4 2019 Transcript (January 31, 2020) at 17-18 (emphases added).

56. On information and belief, given the interaction between Rigby Refining and Phillips, including multiple presentations pertaining to the technology, Phillips copied the patent-pending invention, likely hoping that the PTO would never issue the patents and/or that Magēmā would never assert its intellectual property rights, and implemented the patented technology in at

---

<sup>7</sup> As sulfur content limits have shifted over the years, so have the terms referring to the sulfur content of fuel oil. The Magēmā Patents use the term “low sulfur heavy marine fuel oil”—or LSFO—to refer to marine fuel oil that has a sulfur content of less than 0.5 wt%. The industry, however, currently uses the following terms: very low sulfur fuel oil (“VLSFO”) refers to a fuel oil that has a maximum sulfur content of 0.50% by weight; ultra-low sulfur fuel oil (“ULSFO”) refers to a fuel oil that has a maximum sulfur content of 0.10% by weight; and high sulfur fuel oil (“HSFO”) refers to a fuel oil that has a sulfur content of more than 0.50% by weight. MEPC 320(74). Accordingly, LSFO and VLSFO are used interchangeably herein with respect to sulfur content.



least its Wood River Refinery and Bayway Refinery.

57. Despite Magēmā's best efforts, Phillips has not responded to Magēmā's repeated inquiries pertaining to the Magēmā Patents.

**COUNT I: Infringement of the '884 Patent**

58. Magēmā re-alleges and incorporates by reference each of the allegations in the preceding paragraphs as if fully set forth herein.

59. On information and belief, Phillips and WRB have been, are now, and will continue making, using, supplying, trading, selling, and/or offering to sell infringing LSFO products, including the LSFO product described in Phillips' VLSFO SDS and/or LSFO products produced through the implementation of the LSFO hydrotreater projects in at least the Wood River Refinery (Phillips 66, Phillips 66 Company and WRB) and the Bayway Refinery (Phillips 66 and Phillips 66 Company) (the "Accused Products").

60. On information and belief, Phillips has been, is now, and will continue directly infringing—literally and/or under the doctrine of equivalents—at least Claim 1 of the '884 Patent, in violation of 35 U.S.C. § 271 *et seq.*, by making, using (including supplying and trading), selling and/or offering to sell the Accused Products in the United States.

61. On information and belief, WRB has been, is now, and will continue directly infringing—literally and/or under the doctrine of equivalents—at least Claim 1 of the '884 Patent, in violation of 35 U.S.C. § 271 *et seq.*, by making, using (including supplying and trading), selling and/or offering to sell the Accused Products in the United States.

62. Claim 1 of the '884 Patent is reproduced below:

1. A low sulfur heavy marine fuel oil, consisting essentially of a 100% hydroprocessed high sulfur heavy marine fuel oil, wherein prior to hydroprocessing the high sulfur heavy marine fuel oil is compliant with ISO 8217:2017 and is of merchantable quality as a residual marine fuel oil but has a sulfur content (ISO 14596 or ISO 8754) greater than 0.5%

wt. and wherein the low sulfur heavy marine fuel oil is compliant with ISO 8217:2017 and is of merchantable quality as a residual marine fuel oil and has a sulfur content (ISO 14596 or ISO 8754) less than 0.5 wt%.

63. Phillips' VLSFO is a low sulfur heavy marine fuel oil, having a sulfur content of less than 0.5 wt %. *See, e.g.*, Exhibit 15 (SDS Very Low Sulfur Fuel Oil). Phillips describes VLSFO as comprised of "100%" "Fuel oil, no. 6." *Id.* at 2. On information and belief, Phillips' VLSFO is not blended with distillate, or distillate-like, hydrocarbons. *See, e.g., id.*<sup>8</sup>

64. Phillips has at least two LFSO hydrotreater projects, the "Wood River LSFO hydrotreater project" and the "Bayway LSFO hydrotreater project." Exhibit 13 (Slides delivered at the 2019 Energy Conference on June 18, 2019) at 13. Phillips' LSFO hydrotreater projects allow it to take "high sulfur *fuel oil*" and "turn it into" "low sulfur *fuel oil*." *See, e.g.*, Exhibit 14 (November 6, 2019 Investor Day Transcript) at 20 (emphases added); Exhibit 17 (Q3 2019 Earnings Conference Call Transcript (Oct. 25, 2019)) at 16; Exhibit 16 (Q4 2019 Earnings Conference Call Transcript (January 31, 2020)) at 17-18. The industry uses the term "high sulfur" to refer to fuels having greater than 0.50% wt sulfur. *See* IMO's 2019 Guidelines.

65. In its permit applications for the Wood River Refinery LFSO hydrotreater, Phillips described to the Illinois EPA that its "International Maritime Organization (IMO) Fuel Treatment Project would enable the refinery to produce *lower sulfur No. 6 Fuel Oil* for use in marine vessels that would meet *new IMO standards for the sulfur content of fuel oil*." Exhibit 8 (March 2018 Fuel Treatment Project Summary) at 2 (emphasis added). On information and belief, the only IMO-compliant lower sulfur No. 6 Fuel Oil Phillips produces is VLSFO. *See, e.g.*, Exhibit 15 (Safety Data Sheet ("SDS") Very Low Sulfur Fuel Oil).

---

<sup>8</sup> To the extent that Phillips and/or WRB makes, uses, offers to sell, or sells a blend having a majority by volume of the Accused Products, such a blend would infringe Claim 5 of the '884 Patent.

66. As of the filing of this Complaint, Phillips has two current SDSs for 100% “Fuel Oil No. 6” products. The first SDS is for a HSFO No. 6 product that has a total sulfur content of “ $\leq 3.5$  wt%.” Exhibit 18 (SDS HSFO). The second SDS is for a VLSFO No. 6 that contains 100% Fuel Oil No. 6 but has a total sulfur content of “less than 0.5 wt%.” Exhibit 15 (SDS Very Low Sulfur Fuel Oil). On information and belief, Phillips is hydroprocessing a HSFO to make a VLSFO. *See, e.g.*, Exhibit 14 (November 6, 2019 Investor Day Transcript) at 20; Exhibit 17 (Q3 2019 Transcript (Oct. 25, 2019)) at 16; Exhibit 16 (Q4 2019 Transcript (January 31, 2020)) at 17-18.

67. Phillips’ SDSs further indicate that both HSFO and VLSFO are of merchantable quality as a residual marine fuel oil. *See* [www.phillips66.com/customers](http://www.phillips66.com/customers) (providing “[s]afety Data Sheets for all current, *commercially sold* or *traded* products,” including the above-mentioned SDSs.) (emphases added). Moreover, on information and belief, to the extent that Phillips purchases third party HSFO to use as its feedstock, the fuel oil is of merchantable quality as a residual marine fuel oil, as it is sold as a HSFO.

68. Phillips’ current Marine Fuels Sales Addendum<sup>9</sup> (Exhibit 19) provides that “Seller’s fuel grades will conform to ISO 8217 specifications.” In addition, IMO recognizes that “[t]he bunker market uses ISO 8217:2017 specifications to ensure that the properties of the fuels it delivers conform to a standard that mean they comply with MARPOL Annex VI.”<sup>10</sup> Moreover, IMO suggests that “ship operators could consider ordering fuel oil specified in accordance with

---

<sup>9</sup> Phillips’ Marine Fuels Sales Addendum is *available at* <https://www.phillips66.com/customers-site/Documents/Phillips%2066%20Marine%20Fuels%20Sales%20Addendum.pdf>.

<sup>10</sup> IMO’s 2019 Guidelines on consistent implementation of 0.50% sulfur limit under MARPOL Annex VI, MEPC 320(74) *available at* <http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Documents/Resolution%20MEPC.320%2874%29.pdf> (“IMO’s 2019 Guidelines”)

the ISO 8217 marine fuel standard.”<sup>11</sup> On information and belief, the SDSs together with the Sales Addendum and industry practices indicate that the HSFO and VLSFO products meet ISO 8217 specifications. Further, on information and belief, to the extent that Phillips purchases third party HSFO to use in its LSFO hydrotreaters, industry practices, at least, reasonably support that such fuel oil meets ISO 8217 specifications.

69. On information and belief, Phillips has indirectly infringed, and is currently indirectly infringing, at least claim 1 of the ’884 Patent in violation of 35 U.S.C. § 271 *et seq.*, by inducing—as the operator and managing partner of WRB—WRB to make, use (including supply and trade), sell and/or offer to sell the Accused Products in an infringing manner and/or contributing to such infringement with knowledge that its actions are infringing acts, as discussed in the preceding section.

70. Phillips and WRB are not licensed, or otherwise authorized, by Magēmā to make, use, import, sell, or offer to sell any products covered by the ’884 Patent, and Phillips’ and WRB’s conduct is, in every instance, without Magēmā’s consent.

71. Phillips’ and WRB’s infringement of the ’884 Patent has been willful, as described herein. On information and belief, Phillips was aware of the Magēmā patent application that issued as the Magēmā Patents as early as April 2017. At the latest, Phillips became aware of the ’884 Patent on or around June 2019, when Mr. Moore notified Phillips 66 of the issuance of the ’884 Patent as well as the pendency of the other applications that issued as the Magēmā Patents. Accordingly, Phillips—and WRB through Phillips—had pre-suit knowledge of the Magēmā

---

<sup>11</sup> IMO’s Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% Sulfur limit under MARPOL ANNEX VI, *available at* <http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Documents/MEPC.1-Circ.878.pdf> (“IMO’s Guidance”)

Patents.

72. Phillips and WRB have further been aware of the '884 Patent since at least the filing date of this Complaint.

73. Phillips and WRB has acted egregiously in continuing directly and indirectly infringing the Magēmā Patents despite receiving notice of the Magēmā Patents, with full knowledge of the Magēmā Patents' applicability to the Accused Products.

74. Phillips' and WRB's continued infringement has damaged and will continue to damage Magēmā. Magēmā is entitled to damages adequate to compensate for the infringement, but in no event less than a reasonable royalty as provided for in 35 U.S.C. § 284.

75. Because of Phillips' and WRB's willful infringement of the '884 Patent, any damages assessed against Phillips and WRB should be increased up to three times the amount found. As a result of the willful infringement, this is an exceptional case, and Magēmā should, pursuant to 35 U.S.C. § 285, be awarded its reasonable attorney fees in having to pursue this infringement.

76. Due to Phillips' and WRB's infringement of the '884 Patent, Magēmā has suffered, is suffering, and will continue to suffer irreparable injury and damage for which Magēmā has no adequate remedy at law. In contrast, Phillips has reported that its refineries are capable of "swinging" production from one product to another product. Accordingly, the harm posed by an injunction to Phillips and WRB is minimal. Magēmā is therefore entitled to a permanent injunction against Phillips' and WRB's continued infringement.

#### **COUNT II: Infringement of the '141 Patent**

77. Magēmā re-alleges and incorporates by reference each of the allegations in the preceding paragraphs as if fully set forth herein.

78. On information and belief, Phillips has been, is now, and will continue directly

infringing—literally and/or under the doctrine of equivalents—at least Claim 1 of the '141 Patent, in violation of 35 U.S.C. § 271 *et seq.*, at least by using and practicing each step of the claimed processes at its refineries, including but not limited to, at its Wood River Refinery and Bayway Refinery.

79. On information and belief, WRB has been, is now, and will continue directly infringing—literally and/or under the doctrine of equivalents—at least Claim 1 of the '141 Patent, in violation of 35 U.S.C. § 271 *et seq.*, at least by using and practicing each step of the claimed processes at its refineries, including but not limited to, at its Wood River Refinery.

80. Claim 1 of the '141 Patent is reproduced below:

1. A process for treating high sulfur Heavy Marine Fuel Oil for use as feedstock in a subsequent refinery unit, the process comprising:

mixing a quantity of Feedstock Heavy Marine Fuel Oil with a quantity of Activating Gas mixture to give a Feedstock Mixture;

contacting the Feedstock Mixture with one or more catalysts under reactive conditions to form a Process Mixture from said Feedstock Mixture;

receiving said Process Mixture and separating hydrocarbon liquid components of the Process Mixture from any bulk gaseous components of the Process Mixture;

subsequently separating any residual gaseous components and any byproduct hydrocarbon components from the hydrocarbon liquid components to give a Product Heavy Marine Fuel Oil;

and, discharging the Product Heavy Marine Fuel Oil,

wherein the Feedstock Heavy Marine Fuel Oil complies with ISO 8217 (2017) and has a sulfur content (ISO 14596 or ISO 8754) between the range of 5.0 mass % to 1.0 mass %, and wherein said Feedstock Heavy Marine Fuel Oil has a maximum of kinematic viscosity at 50° C (ISO 3104) between the range from 180 mm<sup>2</sup>/s to 700 mm<sup>2</sup>/s; a maximum of density at 15° C. (ISO 3675) between the range of 991.0 kg/m<sup>3</sup> to 1010.0 kg/m<sup>3</sup>; a CCAI in the range of 780 to 870; a flash point (ISO 2719) no lower than 60° C; a total sediment aged (ISO 10307-2) of less than 0.10 mass %; a carbon residue micro method (ISO 10370) less than 20.00 mass % and

wherein the Product Heavy Marine Fuel Oil has a sulfur content (ISO 14596 or ISO 8754) between the range of 0.50 mass % to 0.05 mass % and wherein said Product Heavy Marine Fuel Oil has a maximum of kinematic viscosity at 50° C (ISO 3104) between the range from 180 mm<sup>2</sup>/s to 700 mm<sup>2</sup>/s; a maximum of density at 15° C (ISO 3675) between the range of 991.0 kg/m<sup>3</sup> to 1010.0 kg/m<sup>3</sup>; a CCAI in the range

of 780 to 870; a flash point (ISO 2719) no lower than 60° C; a total sediment aged (ISO 10307-2) of less than 0.10 mass %; a carbon residue micro method (ISO 10370) less than 20.00 mass%.

81. Phillips and WRB use a “high-sulfur material” “as a feedstock for [its] processing units.” Exhibit 16 (Q4 2019 Transcript (January 31, 2020)) at 11, 17-18. Phillips represented to the Illinois EPA that it “receive[s] *high sulfur* fuel oil as a *feedstock* for reprocessing” at the Wood River Refinery. Exhibit 10 (April 2019 HSFO as Feed Permit) at Section 1.1 (emphases added). The industry uses the term “high sulfur” to refer to fuels having greater than 0.50 mass % (wt %) sulfur. *See* IMO’s 2019 Guidelines. Phillips also represented that the Wood River LSFO hydrotreater project “would enable the petroleum refinery to *remove* sulfur compounds *from fuel* to be used on marine vessels so that the fuel would meet new IMO fuel standards.” Exhibit 8 (March 2018 Fuel Treatment Project Summary) at Section 1 (emphases added).

82. Phillips has identified two LSFO hydrotreater projects, the “Wood River LSFO hydrotreater project” and the “Bayway LSFO hydrotreater project.” *See* Exhibit 13 (Slides delivered at the 2019 Energy Conference on June 18, 2019) at 13. On information and belief, the modifications made in connection with the Wood River LSFO hydrotreater project—as reflected in the permit applications—were similarly made as part of the Bayway LSFO hydrotreater project.

83. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries mix at least hydrogen (an activating gas) with the feedstock. Phillips described its Wood River Refinery “hydrogen plant, which supplies hydrogen to the ULD2 Unit that is needed for the desulfurization process and the sulfur recovery units, which then collects this sulfur.” Exhibit 8 (March 2018 Fuel Treatment Project Summary) at 2. Similarly, Phillips stated “[o]ther existing emission units at the refinery would be affected by this project, including . . . the hydrogen plant . . . This is because when ULD2 is *processing fuel oil* rather than ultra-low sulfur diesel, *additional hydrogen is*

*required . . . .*” Exhibit 20 (April 2019 Project Summary) at 2 (emphases added).

84. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries contact the feedstock with one or more catalysts. As described in its permit applications, the Wood River refinery uses its LSFO hydrotreaters for a “desulfurization process,”<sup>12</sup> which use catalysts to facilitate the removal of sulfur. *See* Exhibit 8 (March 2018 Fuel Treatment Project Summary) at 2.

85. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries separate hydrocarbon liquid components from bulk gaseous components. The Wood River Refinery uses at least one process heater and/or at least one cooling tower to separate hydrocarbon liquid components from any bulk gaseous components. Exhibit 7 (March 2018 Permit); Exhibit 21 (April 2019 Permit).

86. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries separate residual gaseous components and byproduct hydrocarbons. The Wood River Refinery uses at least one process heater and/or at least one cooling tower to separate residual gaseous components and any byproduct hydrocarbons. Exhibit 7 (March 2018 Permit); Exhibit 21 (April 2019 Permit).

87. Phillips’ and WRB’s LSFO hydrotreater refineries discharge LSFO products, including VLSFO, which has a total sulfur content of “less than 0.5 wt%.” *See, e.g.*, Exhibit 15 (SDS Very Low Sulfur Fuel Oil) at 2.

88. Phillips’ current Marine Fuels Sales Addendum (Exhibit 19) provides that “Seller’s fuel grades will conform to ISO 8217 specifications.” In addition, IMO recognizes that “[t]he

---

<sup>12</sup> *See* Exhibit 22 (Robinson, et al., Hydrotreating and Hydrocracking: Fundamentals (Oct. 2007)) at Section 4.2 and 5, describing the desulfurization process.



bunker market uses ISO 8217:2017 specifications to ensure that the properties of the fuels it delivers conform to a standard that mean they comply with MARPOL Annex VI.”<sup>13</sup> Moreover, IMO suggests that “ship operators could consider ordering fuel oil specified in accordance with the ISO 8217 marine fuel standard.”<sup>14</sup> On information and belief, the SDSs together with the Sales Addendum and industry practices indicate that the HSFO and VLSFO products meet ISO 8217 specifications. Further, on information and belief, to the extent that Phillips purchases third party HSFO to use as feedstock in its LSFO hydrotreaters, industry practices, at least, reasonably support that such fuel oil meets ISO 8217 specifications.

89. An ISO 8217 compliant fuel oil has a maximum of kinematic viscosity at 50° C (ISO 3104) between the range from 180 mm<sup>2</sup>/s to 700 mm<sup>2</sup>/s, a maximum of density at 15° C. (ISO 3675) between the range of 991.0 kg/m<sup>3</sup> to 1010.0 kg/m<sup>3</sup>, a CCAI in the range of 780 to 870, a flash point (ISO 2719) no lower than 60° C, a total sediment aged (ISO 10307-2) of less than 0.10 mass %, and a carbon residue micro method (ISO 10370) less than 20.00 mass %. *See* Exhibit 5 (ISO 8217 Table).

90. On information and belief, Phillips has indirectly infringed, is currently indirectly infringing, and will continue indirectly infringing at least claim 1 of the ’141 Patent in violation of 35 U.S.C. § 271 *et seq.*, by inducing—as the operator of the Wood River Refinery and as the managing partner of WRB—WRB to use and to practice the patented processes and/or contributing to such infringement with knowledge that its actions are infringing acts, as discussed in the preceding section.

91. Phillips and WRB are not licensed or otherwise authorized by Magēmā to use or

---

<sup>13</sup> IMO’s 2019 Guidelines.

<sup>14</sup> IMO’s Guidance.

practice the claimed processes of the '141 Patent, and Phillips' and WRB's conduct is, in every instance, without Magēmā's consent.

92. Phillips' and WRB's infringement of the '141 Patent has been willful, as described herein. On information and belief, Phillips was aware of the Magēmā patent applications that issued as the Magēmā Patents as early as April 2017. At the latest, Phillips became aware of the '141 Patent on or around June 2019, when Mr. Moore notified Phillips 66 of the issuance of the '884 Patent as well as the pendency of the other applications that issued as the Magēmā Patents (which included the '141 Patent). Accordingly, Phillips—and WRB through Phillips—had pre-suit knowledge of the Magēmā Patents.

93. Phillips and WRB have further been aware of the '141 Patent since at least the filing date of this Complaint.

94. Phillips and WRB has acted egregiously in continuing directly and indirectly infringing the Magēmā Patents despite receiving notice of the Magēmā Patents, with full knowledge of the Magēmā Patents' applicability to the LSFO hydrotreater projects.

95. Phillips' and WRB's continued infringement has damages and will continue to damage Magēmā. Magēmā is entitled to damages adequate to compensate for the infringement, but in no event less than a reasonable royalty as provided for in 35 U.S.C. § 284.

96. Because of Phillips' and WRB's willful infringement of the '141 Patent, any damages assessed against Phillips and WRB should be increased up to three times the amount found. As a result of the willful infringement, this is an exceptional case, and Magēmā should, pursuant to 35 U.S.C. § 285, be awarded its reasonable attorney fees in having to pursue this infringement.

97. Due to Phillips' and WRB's infringement of the '141 Patent, Magēmā has suffered,

is suffering, and will continue to suffer irreparable injury and damage for which Magēmā has no adequate remedy at law. In contrast, Phillips has reported that its refineries are capable of “swinging” production from one product to another product. Accordingly, the harm posed by an injunction to Phillips and WRB is minimal. Magēmā is therefore entitled to a permanent injunction against Phillips’ and WRB’s continued infringement.

### **COUNT III: Infringement of the ’709 Patent**

98. Magēmā re-alleges and incorporates by reference each of the allegations in the preceding paragraphs as if fully set forth herein.

99. On information and belief, Phillips has been, is now, and will continue directly infringing—literally and/or under the doctrine of equivalents—at least Claim 1 of the ’709 Patent, in violation of 35 U.S.C. § 271 *et seq.*, at least by using and practicing each step of the claimed processes at its refineries, including but not limited to, at its Wood River Refinery and Bayway Refinery.

100. On information and belief, WRB has been, is now, and will continue directly infringing—literally and/or under the doctrine of equivalents—at least Claim 1 of the ’709 Patent, in violation of 35 U.S.C. § 271 *et seq.*, at least by using and practicing each step of the claimed processes at its refineries, including but not limited to, at its Wood River Refinery.

101. Claim 1 of the ’709 Patent is reproduced below:

1. A process for production of a Product Heavy Marine Fuel Oil from Distressed Fuel Oil Materials, the process comprising:

processing the Distressed Fuel Oil Materials in a pre-treatment unit under operative conditions to give a pre-treated Feedstock Heavy Marine Fuel Oil, and wherein the pre-treatment unit is selected from the group comprising: steam stripper column; a distillation column; a divided wall distillation column; a reactive distillation column; a countercurrent extraction unit, a fixed bed absorption unit, a solids separation unit, a blending unit; and combinations thereof,

wherein the pre-treated Feedstock Heavy Marine Fuel Oil complies with ISO 8217 except for the environmental contaminates including a sulfur content (ISO

14596 or ISO 8754) between the range of 5.0 wt % to 0.50 wt %;  
 mixing a quantity of the pre-treated Feedstock Heavy Marine Fuel Oil with a quantity of Activating Gas mixture to give a Feedstock Mixture;  
 contacting the Feedstock Mixture with one or more transition metal catalysts under reactive conditions to form a Process Mixture from said Feedstock Mixture;  
 receiving said Process Mixture and separating Product Heavy Marine Fuel Oil liquid components of the Process Mixture from gaseous components and by-product hydrocarbon components of the Process Mixture and,  
 discharging the Product Heavy Marine Fuel Oil.

102. On information and belief, Phillips and WRB are processing Distressed Fuel Oil Materials in Vacuum Flasher No. 5. *See* Exhibit 10 (April 2019 HSFO as Feed Permit) at 2, 7. To the extent that the feedstock to Vacuum Flasher No. 5 is not compliant with ISO 8217, then it is Distressed Fuel Oil. Vacuum Flasher No. 5 is a distillation column, which is a pre-treatment unit. *See* Exhibit 10 (April 2019 HSFO as Feed Permit) at 2, 7.

103. Phillips and WRB use a “high-sulfur material” “as a feedstock for [its] processing units.” Exhibit 16 (Q4 2019 Transcript (January 31, 2020)) at 11, 17-18. Phillips represented to the Illinois EPA that it “receive[s] *high sulfur* fuel oil as a *feedstock* for reprocessing.” Exhibit 10 (April 2019 HSFO as Feed Permit) at Section 1.1 (emphases added). The industry uses the term “high sulfur” to refer to fuels having greater than 0.50 wt % sulfur. *See* IMO’s 2019 Guidelines. Moreover, Phillips also represented the Wood River LSFO hydrotreater project “would enable the petroleum refinery to *remove* sulfur compounds *from fuel* to be used on marine vessels so that the fuel would meet new IMO fuel standards.” Exhibit 7 (March 2018 Permit) at Paragraph 1 (emphases added).

104. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries mix at least hydrogen (an activating gas) with the feedstock. Phillips described the Wood River Refinery “hydrogen plant, which supplies hydrogen to the ULD2 Unit that is needed for the

desulfurization process and the sulfur recovery units, which then collects this sulfur.” Exhibit 8 (March 2018 Fuel Treatment Project Summary) at 2. Similarly, Phillips also stated “[o]ther existing emission units at the refinery would be affected by this project, including . . . the hydrogen plant . . . This is because when ULD2 is *processing fuel oil* rather than ultra-low sulfur diesel, *additional hydrogen is required* . . . .” Exhibit 20 (April 2019 Project Summary) at 2 (emphases added).

105. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries contact the feedstock with one or more catalysts. As described in its permit applications, Phillips uses its LSFO hydrotreaters for a “desulfurization process,”<sup>15</sup> which use catalysts to facilitate the removal of sulfur. *See* Exhibit 8 (March 2018 Fuel Treatment Project Summary).

106. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries separate hydrocarbon liquid components from bulk gaseous components. The Wood River Refinery uses at least one process heater and/or at least one cooling tower to separate hydrocarbon liquid components from bulk gaseous components. Exhibit 7 (March 2018 Permit); Exhibit 21 (April 2019 Permit).

107. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries separate residual gaseous components and byproduct hydrocarbons. The Wood River Refinery uses at least one process heater and/or at least one cooling tower to separate residual gaseous components and byproduct hydrocarbons. Exhibit 7 (March 2018 Permit); Exhibit 21 (April 2019 Permit).

108. Phillips’ and WRB’s LSFO hydrotreater refineries discharge LSFO products,

---

<sup>15</sup> *See* Exhibit 22 (Robinson, et al., *Hydrotreating and Hydrocracking: Fundamentals* (Oct. 2007)) at Section 4.2 and 5, describing the desulfurization process including catalysts.

including VLSFO, which has a total sulfur content of “less than 0.5 wt%.” *See, e.g.*, Exhibit 15 (SDS Very Low Sulfur Fuel Oil).

109. Phillips’ current Marine Fuels Sales Addendum (Exhibit 19) provides that “Seller’s fuel grades will conform to ISO 8217 specifications.” In addition, IMO recognizes that “[t]he bunker market uses ISO 8217:2017 specifications to ensure that the properties of the fuels it delivers conform to a standard that mean they comply with MARPOL Annex VI.”<sup>16</sup> Moreover, IMO suggests that “ship operators could consider ordering fuel oil specified in accordance with the ISO 8217 marine fuel standard.”<sup>17</sup> On information and belief, the SDSs together with the Sales Addendum and industry practices indicate that the HSFO and VLSFO products meet ISO 8217 specifications. Further, on information and belief, to the extent that Phillips purchases third party HSFO to use as feedstock for the LSFO hydrotreater refineries, industry practices, at least, reasonably support that such fuel oil meets ISO 8217 specifications.

110. On information and belief, Phillips has indirectly infringed, is currently indirectly infringing, and will continue indirectly infringing at least claim 1 of the ’709 Patent in violation of 35 U.S.C. § 271 *et seq.*, by inducing—as the operator of the Wood River Refinery and as the managing partner of WRB—WRB to use and to practice the patented processes and/or contributing to such infringement with knowledge that their actions are infringing acts, as discussed in the preceding section.

111. Phillips and WRB are not licensed or otherwise authorized by Magēmā to use or practice the claimed processes of the ’709 Patent, and Phillips’ and WRB’s conduct is, in every instance, without Magēmā’s consent.

---

<sup>16</sup> IMO’s 2019 Guidelines.

<sup>17</sup> IMO’s Guidance.

112. Phillips' and WRB's infringement of the '709 Patent has been willful, as described herein. On information and belief, Phillips was aware of the Magēmā patent applications that issued as the Magēmā Patents as early as April 2017. At the latest, Phillips became aware of the '709 Patent on or around June 2019, when Mr. Moore notified Phillips 66 of the issuance of the '884 Patent as well as the pendency of the other applications that issued as the Magēmā Patents (which included the '709 Patent). Accordingly, Phillips—and WRB through Phillips—had pre-suit knowledge of the Magēmā Patents.

113. Phillips and WRB have further been aware of the '709 Patent since at least the filing date of this Complaint.

114. Phillips and WRB has acted egregiously in continuing directly and indirectly infringing the Magēmā Patents despite receiving notice of the Magēmā Patents, with full knowledge of the Magēmā Patents' applicability to the LSFO hydrotreater projects.

115. Phillips' and WRB's continued infringement has damages and will continue to damage Magēmā. Magēmā is entitled to damages adequate to compensate for the infringement, but in no event less than a reasonable royalty as provided for in 35 U.S.C. § 284.

116. Because of Phillips' and WRB's willful infringement of the '709 Patent, any damages assessed against Phillips and WRB should be increased up to three times the amount found. As a result of the willful infringement, this is an exceptional case, and Magēmā should, pursuant to 35 U.S.C. § 285, be awarded its reasonable attorney fees in having to pursue this infringement.

117. Due to Phillips' and WRB's infringement of the '709 Patent, Magēmā has suffered, is suffering, and will continue to suffer irreparable injury and damage for which Magēmā has no adequate remedy at law. In contrast, Phillips has reported that its refineries are capable of

“swinging” production from one product to another product. Accordingly, the harm posed by an injunction to Phillips and WRB is minimal. Magēmā is therefore entitled to a permanent injunction against Phillips’ and WRB’s continued infringement.

**COUNT IV: Infringement of the ’287 Patent**

118. Magēmā re-alleges and incorporates by reference each of the allegations in the preceding paragraphs as if fully set forth herein.

119. On information and belief, Phillips and WRB have been, is now, and will continue using, supplying, trading, selling, and/or offering to sell the Accused Products.

120. On information and belief, Phillips has been, is now, and will continue directly infringing—literally and/or under the doctrine of equivalents—at least Claim 1 of the ’287 Patent, in violation of 35 U.S.C. § 271 *et seq.*, by making, using (including supplying and trading), selling and/or offering to sell the Accused Products in the United States.

121. On information and belief, WRB has been, is now, and will continue directly infringing—literally and/or under the doctrine of equivalents—at least Claim 1 of the ’287 Patent, in violation of 35 U.S.C. § 271 *et seq.*, by making, using (including supplying and trading), selling and/or offering to sell the Accused Products in the United States.

122. Claim 1 of the ’287 Patent is reproduced below:

1. A heavy marine fuel oil product that is ISO 8217:2017 compliant for a residual marine fuel, and is of merchantable quality as such, and has a sulfur content (ISO 14596 or ISO 8754) less than 0.5 wt %, and is made from a heavy marine fuel oil that is ISO 8217:2017 compliant that has a sulfur content (ISO 14596 or ISO 8754) greater than 0.5% wt., said product being produced by a process comprising:
  - a) combining a predetermined quantity of the heavy marine fuel oil with a predetermined amount of an Activating Gas to form a Feedstock Mixture;
  - b) bringing the Feedstock Mixture up to predetermined process conditions of temperature and pressure to form a heated and pressurized Feedstock Mixture;
  - c) contacting said heated and pressurized Feedstock Mixture in at least one reactor vessel



with one or more catalyst systems selected from the group consisting of: an ebulliated bed supported transition metal heterogeneous catalyst, a fixed bed supported transition metal heterogeneous catalyst, and a combination of ebulliated bed supported transition metal heterogeneous catalysts and fixed bed supported transition metal heterogeneous catalysts, wherein said contacting takes place under reactive process conditions to form a Process Mixture;

- d) removing the Process Mixture from being in contact with the one or more catalyst systems in the at least one reactor vessel and sending the Process Mixture via fluid communication from the at least one reactor vessel to at least one second vessel for separating the Liquid Components of the Process Mixture from the Gaseous Components of the Process Mixture;
- e) sending by fluid communication the Liquid Components of the Process Mixture from the at least one second vessel to at least one third vessel, and removing from the Liquid Components of the Process Mixture any residual gaseous components and any by-product hydrocarbon components to form said heavy marine fuel oil product; and,
- f) discharging from said at least one third vessel said heavy marine fuel oil product.

123. Phillips' VLSFO is a low sulfur heavy marine fuel oil, having a sulfur content of less than 0.5 wt%. *See, e.g.*, Exhibit 15 (SDS Very Low Sulfur Fuel Oil).

124. Phillips has at least two LFSO hydrotreater projects, the "Wood River LSFO hydrotreater project" and the "Bayway LSFO hydrotreater project." Exhibit 13 (Slides delivered at the 2019 Energy Conference on June 18, 2019). Phillips' LSFO hydrotreater projects allow it to take "high sulfur *fuel oil*" and "turn it into" "low sulfur *fuel oil*." *See, e.g.*, Exhibit 14 (November 6, 2019 Investor Day Transcript) at 20 (emphases added); Exhibit 17 (Q3 2019 Transcript (Oct. 25, 2019)) at 16; Exhibit 16 (Q4 2019 Transcript (January 31, 2020)) at 17-18.

125. Phillips and WRB use a "high-sulfur material" "as a feedstock for [its] processing units." Exhibit 16 (Q4 2019 Transcript (January 31, 2020)) at 11, 17-18. Phillips represented to the Illinois EPA that it "receive[s] *high sulfur* fuel oil as a *feedstock* for reprocessing." Exhibit 10 (April 2019 HSFO as Feed Permit) at Section 1.1 (emphases added). The industry uses the term "high sulfur" to refer to fuels having greater than 0.50 wt % sulfur. *See* IMO's 2019 Guidelines. Moreover, Phillips also represented the Wood River LSFO hydrotreater project "would enable the

petroleum refinery to *remove* sulfur compounds *from fuel* to be used on marine vessels so that the fuel would meet new IMO fuel standards.” Exhibit 7 (March 2018 Permit) at Paragraph 1 (emphases added).

126. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries mix at least hydrogen (an activating gas) with the feedstock. Phillips described the Wood River Refinery “hydrogen plant, which supplies hydrogen to the ULD2 Unit that is needed for the desulfurization process and the sulfur recovery units, which then collects this sulfur.” Exhibit 8 (March 2018 Fuel Treatment Project Summary) at 2. Similarly, Phillips also stated “[o]ther existing emission units at the refinery would be affected by this project, including . . . the hydrogen plant . . . This is because when ULD2 is *processing fuel oil* rather than ultra-low sulfur diesel, *additional hydrogen is required* . . . .” Exhibit 11 (April 2019 Project Summary) at 2 (emphases added).

127. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries contact the feedstock with one or more catalysts. As described in its permit applications, Phillips uses its LSFO hydrotreaters for a “desulfurization process,”<sup>18</sup> which, on information and belief, use fixed bed supported transition metal heterogeneous catalyst. Exhibit 8 (March 2018 Fuel Treatment Project Summary).

128. On information and belief, Phillips’ and WRB’s LSFO hydrotreater refineries separate hydrocarbon liquid components from gaseous components. The Wood River Refinery uses at least one process heater and/or at least one cooling tower to separate hydrocarbon liquid components from bulk gaseous components. Exhibit 7 (March 2018 Permit); Exhibit 21 (April

---

<sup>18</sup> See Exhibit 22 (Robinson, et al., Hydrotreating and Hydrocracking: Fundamentals (Oct. 2007)) at Section 4.2 and 5, describing the desulfurization process including catalysts.

2019 Permit).

129. On information and belief, Phillips' and WRB's LSFO hydrotreater refineries separate residual gaseous components and byproduct hydrocarbons. The Wood River Refinery uses at least one process heater and/or at least one cooling tower to separate residual gaseous components and byproduct hydrocarbons. Exhibit 7 (March 2018 Permit); Exhibit 21 (April 2019 Permit).

130. Phillips' and WRB's LSFO hydrotreater refineries produce and discharge LSFO products, including VLSFO, which has a total sulfur content of "less than 0.5 wt%." *See, e.g.*, Exhibit 15 (SDS Very Low Sulfur Fuel Oil).

131. Phillips' SDSs further indicates that both HSFO and VLSFO are of merchantable quality as a residual marine fuel oil. *See* [www.phillips66.com/customers](http://www.phillips66.com/customers) (providing "[s]afety Data Sheets for all current, *commercially sold* or *traded* products," including the above-mentioned SDSs) (emphases added). Moreover, on information and belief, to the extent that Phillips purchases third party HSFO, the fuel oil is of merchantable quality as a residual marine fuel oil, as it is sold as a HSFO.

132. Phillips' current Marine Fuels Sales Addendum<sup>19</sup> (Exhibit 19) provides that "Seller's fuel grades will conform to ISO 8217 specifications." In addition, IMO recognizes that "[t]he bunker market uses ISO 8217:2017 specifications to ensure that the properties of the fuels it delivers conform to a standard that mean they comply with MARPOL Annex VI."<sup>20</sup> Moreover, IMO suggests that "ship operators could consider ordering fuel oil specified in accordance with

---

<sup>19</sup> Phillips' Marine Fuels Sales Addendum is *available at* <https://www.phillips66.com/customers-site/Documents/Phillips%2066%20Marine%20Fuels%20Sales%20Addendum.pdf>.

<sup>20</sup> IMO's 2019 Guidelines.

the ISO 8217 marine fuel standard.”<sup>21</sup> On information and belief, the SDSs together with the Sales Addendum and industry practices indicate that the HSFO and VLSFO products meet ISO 8217 specifications. Further, on information and belief, to the extent that Phillips purchases third party HSFO to use in its LSFO hydrotreaters, industry practices, at least, reasonably support that such fuel oil meets ISO 8217 specifications.

133. On information and belief, Phillips has indirectly infringed, is currently indirectly infringing, and will continue indirectly infringing at least claim 1 of the ’287 Patent in violation of 35 U.S.C. § 271 *et seq.*, by inducing—as the operator and managing partner of WRB—WRB to make, use (including supply and trade), sell and/or offer to sell the Accused Products in an infringing manner and/or contributing to such infringement with knowledge that their actions are infringing acts, as discussed in the preceding section.

134. Phillips and WRB are not licensed or otherwise authorized by Magēmā to make, use, import, sell, or offer to sell any products covered by the ’287 Patent, and Phillips’ and WRB’s conduct is, in every instance, without Magēmā’s consent.

135. Phillips’ and WRB’s infringement of the ’287 Patent has been willful, as described herein. On information and belief, Phillips was aware of the Magēmā patent applications that issued as the Magēmā Patents as early as April 2017. At the latest, Phillips became aware of the ’884 Patent on or around June 2019, when Mr. Moore notified Phillips 66 of the issuance of the ’884 Patent as well as the pendency of the other applications that issued as the Magēmā Patents (including the ’287 Patent). Accordingly, Phillips—and WRB through Phillips—had pre-suit knowledge of the Magēmā Patents.

136. Phillips and WRB have further been aware of the ’287 Patent since at least the filing

---

<sup>21</sup> IMO’s Guidance.

date of this Complaint.

137. Phillips and WRB has acted egregiously in continuing directly and indirectly infringing the Magēmā Patents despite receiving notice of the Magēmā Patents, with full knowledge of the Magēmā Patents’ applicability to the Accused Products.

138. Phillips’ and WRB’s continued infringement has damages and will continue to damage Magēmā. Magēmā is entitled to damages adequate to compensate for the infringement, but in no event less than a reasonable royalty as provided for in 35 U.S.C. § 284.

139. Because of Phillips’ and WRB’s willful infringement of the ’287 Patent, any damages assessed against Phillips and WRB should be increased up to three times the amount found. As a result of the willful infringement, this is an exceptional case, and Magēmā should, pursuant to 35 U.S.C. § 285, be awarded its reasonable attorney fees in having to pursue this infringement.

140. Due to Phillips’ and WRB’s infringement of the ’287 Patent, Magēmā has suffered, is suffering, and will continue to suffer irreparable injury and damage for which Magēmā has no adequate remedy at law. In contrast, Phillips has reported that its refineries are capable of “swinging” production from one product to another product. Accordingly, the harm posed by an injunction to Phillips and WRB is minimal. Magēmā is therefore entitled to a permanent injunction against Phillips’ and WRB’s continued infringement.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff Magēmā Technology LLC respectfully requests that the Court enter judgment in its favor against Defendants, granting the following relief:

- A. A judgment that Defendants infringe, directly and indirectly, each of the Magēmā Patents;
- B. An order permanently enjoining Defendants and their agents, servants, officers, directors, employees, affiliated entities and all persons acting in concert or privity with them, from

making, offering to sell, selling, using, or importing into the United States products claimed in any of the claims of the Magēmā Patents, from using or performing methods claimed in any of the claims of the Magēmā Patents, from inducing others to make, offer, sell, use or import into the United States articles that infringe, or are made by a process that infringes, any claim of the Magēmā Patents, and from contributing to others' infringement of any claim of the Magēmā Patents, until after the expiration of the Magēmā Patents including any extensions and/or additional periods of exclusivity to which Plaintiff is or becomes entitled;

- C. An order awarding Magēmā all damages caused by Defendants' infringement of each of the Magēmā Patents (but in no event less than a reasonable royalty) pursuant to 35 U.S.C. §§ 154(d) and 284;
- D. An order awarding Magēmā any supplemental damages or profits for any continuing post-verdict infringement up until the entry of a final judgment, with an accounting, if needed;
- E. A judgment that Defendants' infringement of the Magēmā Patents was and continues to be willful and an order awarding Magēmā treble damages pursuant to 35 U.S.C. § 284;
- F. A judgment and order requiring Defendants to pay Magēmā pre-judgment and post-judgment interest to the fullest extent allowed under the law, as well as their costs;
- G. An order determining that this case is an exceptional case pursuant to 35 U.S.C. § 285, and an award of Magēmā's attorney fees, costs and expenses incurred in bringing and prosecuting this case, pursuant to 35 U.S.C. § 285; and
- H. Such other and additional relief as this Court deems just and proper.

**DEMAND FOR JURY TRIAL**

Magēmā Technology LLC respectfully requests a trial by jury of all issues so triable.

Dated this 13th day of July, 2020.

Respectfully submitted,

By: /s/ Miranda Y. Jones

Miranda Y. Jones

*Attorney in Charge*

Texas Bar No. 24065519

Southern District ID No. 1147635

Ray Torgerson

Texas Bar No. 24003067

Southern District ID No. 22846

Erin C. Villaseñor

Texas Bar No. 24072407

Southern District ID No. 1114483

PORTER HEDGES LLP

1000 Main Street, 36<sup>th</sup> Floor

Houston, TX 77002

Telephone: 713-226-6000

Facsimile: 713-228-1331

MirandaJones@porterhedges.com

RTorgerson@porterhedges.com

EVillaseñor@porterhedges.com

*Attorneys for Plaintiff*

*Magēmā Technology LLC*